

What is claimed is:

1. A cryptographic feature enablement system comprising:

5 a CPU;

a bus operably and directly connected to said CPU;

at least one non-volatile read/write memory operably connected to said bus  
and accessible by said CPU;

10 a cryptographic chip having disposed therein at least one cryptographic  
system and algorithm, and further operably connected to said bus and accessible  
by said CPU;

an encrypted token operably disposed within said at least one non-volatile  
read/write memory and further configured to contain initialization data for  
enabling a desired set of cryptographic capabilities corresponding to said  
15 cryptographic chip;

system-specific information assigned to an individual system and readable  
by said CPU; and,

a token decryption system operably disposed within said at least one non-  
volatile read/write memory configured to enable and use said cryptographic chip  
20 and said system-specific information to decrypt said encrypted token, and further  
configured to reconfigure said cryptographic chip in accordance with said

initialization data in said token and in accordance with said system-specific information.

2. The cryptographic feature enablement system of claim 1 where said  
5 at least one non-volatile read/write memory comprises FLASH memory.

3. The cryptographic feature enablement system of claim 1 where said  
system-specific information is the system's MAC address.

10 4. The cryptographic feature enablement system of claim 3 where said  
MAC address is used to generate a private key.

5. A method for initializing cryptographic functionality in a system, the  
method comprising:

15 starting the boot process in a system;  
using said system's system-specific information to generate a key;  
decrypting an encrypted token using said key;  
establishing if said decrypted token is useable for a cryptographic chip in  
said system;

20 initializing said cryptographic chip in relationship to said decrypted token if  
said decrypted token is operable for a cryptographic chip in said system; and,

initializing said cryptographic chip in accordance with a default if said  
decrypted token is not usable.

6. The method of claim 5 where said default initialization is to  
5 immediately bring the system back down.

7. The method of claim 5 where said default initialization is to bring  
the system up with no cryptographic capabilities enabled.

10 8. The method of claim 5 where said system-specific information is  
said system's MAC address.

9. A program storage device readable by a machine, tangibly  
embodying a program of instructions executable by a machine for initializing  
15 cryptographic functionality in a system, the method comprising:  
starting the boot process in a system;  
using said system's system-specific information to generate a key;  
decrypting an encrypted token using said key;  
establishing if said decrypted token is useable for a cryptographic chip in  
20 said system;

initializing said cryptographic chip in relationship to said decrypted token if  
said decrypted token is operable for a cryptographic chip in said system; and,

initializing said cryptographic chip in accordance with a default if said  
decrypted token is not usable.

10. The method of claim 9 where said default initialization is to  
5 immediately bring the system back down.

11. The method of claim 9 where said default initialization is to bring  
the system up with no cryptographic capabilities enabled.

10 12. The method of claim 9 where said system-specific information is  
said system's MAC address.

13. A system for initializing cryptographic functionality in a system, the  
system comprising:

15 means for starting the boot process in a system;  
means for using said system's system-specific information to generate a  
key;  
means for decrypting an encrypted token using said key;  
means for establishing if said decrypted token is useable for a  
20 cryptographic chip in said system;

means for initializing said cryptographic chip in relationship to said  
decrypted token if said decrypted token is operable for a cryptographic chip in said  
system; and,

means for initializing said cryptographic chip in accordance with a default  
5 if said decrypted token is not usable.

14. The system of claim 13 where said default initialization is to  
immediately bring the system back down.

10 15. The system of claim 13 where said default initialization is to bring  
the system up with no cryptographic capabilities enabled.

16. The system of claim 13 where said system-specific information is  
said system's MAC address.

15 17. A method for installing cryptographic initialization data in a system  
for use during system booting, the method comprising:

identifying the system-specific information of said system;

generating at least one key using said system-specific information;

20 using one key of said at least one keys to encrypt a token, where said token  
comprises cryptographic initialization data applicable to said system; and,

writing said encrypted token in non-volatile memory in said system, where said non-volatile memory is configured to be accessible by a CPU in said system during system initialization.

5           18.    The method of claim 17 where said non-volatile memory is FLASH memory.

10           19.    The method of claim 17 where said generation of at least one key further comprises generating a public key and a private key, and choosing said public key to encrypt said token and choosing said private key to use for decrypting said token.

15           20.    The method of claim 17 where said system-specific information is said system's MAC address.

21.    A program storage device readable by a machine, tangibly embodying a program of instructions executable by a machine for installing cryptographic initialization data in a system for use during system booting, the method comprising:

20           identifying the system-specific information of said system;  
generating at least one key using said system-specific information;

using one key of said at least one keys to encrypt a token, where said token comprises cryptographic initialization data applicable to said system; and,

writing said encrypted token in non-volatile memory in said system, where said non-volatile memory is configured to be accessible by a CPU in said system  
5 during system initialization.

22. The method of claim 21 where said non-volatile memory is FLASH memory.

10 23. The method of claim 21 where said generation of at least one key further comprises generating a public key and a private key, and choosing said public key to encrypt said token and choosing said private key to use for decrypting said token.

15 24. The method of claim 21 where said system-specific information is said system's MAC address.

25. A system for installing cryptographic initialization data in a system for use during system booting comprising:

20 means for identifying the system-specific information of said system;  
means for generating at least one key using said system-specific information;

means for using one key of said at least one keys to encrypt a token, where said token comprises cryptographic initialization data applicable to said system; and,

means for writing said encrypted token in non-volatile memory in said system, where said non-volatile memory is configured to be accessible by a CPU in said system during system initialization.

26. The system of claim 25 where said non-volatile memory is FLASH memory.

27. The system of claim 25 where said means for generation of at least one key further comprises generating a public key and a private key, and choosing said public key to encrypt said token and choosing said private key to use for decrypting said token.

28. The system of claim 25 where said system-specific information is said system's MAC address.